

§ 73.68 Sampling systems for antenna monitors.

(a) Each AM station permittee authorized to construct a new directional antenna system, must install the sampling system in accordance with the following specifications:

(1) Devices used to extract or sample the current and the transmission line connecting the sampling elements to the antenna monitor must provide accurate and stable signals to the monitor (e.g., rigidly mounted and non-rotatable loops and all system components protected from physical and environmental disturbances).

(2) Sampling lines for directional antennas may be of different lengths provided the phase difference of signals at the monitor are less than 0.5 degrees between the shortest and longest cable lengths due to temperature variations to which the system is exposed.

(3) Other configurations of sampling systems may be used upon demonstration of stable operation to the FCC.

(b) A station having an antenna sampling system constructed according to the specifications given in paragraph (a) of this section may obtain approval of that system by submitting an informal letter request to the FCC in Washington, DC, Attention: Audio Division, Media Bureau. The request for approval, signed by the licensee or authorized representative, must contain sufficient information to show that the sampling system is in compliance with all requirements of paragraph (a) of this section.

NOTE TO PARAGRAPH (b): A public notice dated December 9, 1985 giving additional information on approval of antenna sampling systems is available through the Internet at <http://www.fcc.gov/mb/audio/decdoc/letter/1985-12-09-sample.html>.

(c) In the event that the antenna monitor sampling system is temporarily out of service for repair or replacement, the station may be operated, pending completion of repairs or replacement, for a period not exceeding 120 days without further authority from the FCC if all other operating parameters and the field monitoring point values are within the limits specified on the station authorization.

(d) If the antenna sampling system is modified or components of the sam-

pling system are replaced, the following procedure shall be followed:

(1) Special Temporary Authority (see § 73.1635) shall be requested and obtained from the Commission's Audio Division, Media Bureau in Washington to operate with parameters at variance with licensed values pending issuance of a modified license specifying parameters subsequent to modification or replacement of components.

(2) Immediately prior to modification or replacement of components of the sampling system, and after a verification that all monitoring point values and operating parameters are within the limits or tolerances specified in the rules, the following indications must be recorded for each radiation pattern: Final plate current and plate voltage, common point current, antenna monitor phase and current indications, and the field strength at each monitoring point. Subsequent to these modifications or changes the procedure must be repeated.

(3) If monitoring point field strengths or antenna monitor parameters exceed allowable limits following the replacement or modification of that portion of the sampling system above the base of the towers, a partial proof of performance shall be executed in accordance with § 73.154. The partial proof of performance shall be accompanied by common point impedance measurements made in accordance with § 73.54.

(4) Request for modification of license shall be submitted to the FCC in Washington, DC, within 30 days of the date of sampling system modification or replacement. Such request shall specify the transmitter plate voltage and plate current, common point current, base currents and their ratios, antenna monitor phase and current indications, and all other data obtained pursuant to this paragraph.

(e) If an existing sampling system is found to be patently of marginal construction, or where the performance of a directional antenna is found to be unsatisfactory, and this deficiency reasonably may be attributed, in whole or in part, to inadequacies in the antenna

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monitoring system, the FCC may require the reconstruction of the sampling system in accordance with requirements specified above.

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§ 73.69 Antenna monitors.

(a) Each station using a directional antenna must have in operation at the transmitter site an FCC authorized antenna monitor.

(b) In the event that the antenna monitor sampling system is temporarily out of service for repair or replacement, the station may be operated, pending completion of repairs or replacement, for a period not exceeding 120 days without further authority from the FCC if all other operating parameters, and the field monitoring point values are within the limits specified on the station authorization.

(c) If conditions beyond the control of the licensee prevent the restoration of the monitor to service within the allowed period, an informal letter request in accordance with § 73.3549 of the Commission's rules must be filed with the FCC, Attention: Audio Division, Media Bureau in Washington, DC for such additional time as may be required to complete repairs of the defective instrument.

(d) If an authorized antenna monitor is replaced by another antenna monitor, the following procedure shall be followed:

(1) Temporary authority shall be requested and obtained from the Commission in Washington to operate with parameters at variance with licensed values, pending issuance of a modified license specifying new parameters.

(2) Immediately before the replacement of the antenna monitor, after a verification that all monitoring point values and the common point current reading are within the limits or tolerances specified in the rules, the following indications must be recorded for each radiation pattern: Final plate current and plate voltage, common point

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current, antenna monitor phase and current indications, and the field strength at each monitoring point.

(3) With the new monitor substituted for the old, all indications specified in paragraph (d)(2) of this section, again must be read. If no change has occurred in the indication for any parameter other than the indications of the antenna monitor, the new antenna monitor indications must be deemed to be those reflecting correct array adjustments.

(4) If it cannot be established by the observations required in paragraph (d)(2) of this section that the common point current reading and the monitoring point values are within the tolerances or limits prescribed by the rules and the instrument of authorization, or if the substitution of the new antenna monitor for the old results in changes in these parameters, a partial proof of performance shall be executed and analyzed in accordance with § 73.154.

(5) An informal letter request for modification of license shall be submitted to the FCC, Attention: Audio Division, Media Bureau in Washington, DC within 30 days of the date of monitor replacement. Such request shall specify the make, type, and serial number of the replacement monitor, phase and sample current indications, and other data obtained pursuant to this paragraph (d).

(e) The antenna monitor must be calibrated according to the manufacturer's instructions as often as necessary to ensure its proper operation.

(Secs. 4, 5, 303, 48 Stat., as amended, 1066, 1068, as amended, 1082, as amended; 47 U.S.C. 154, 303. Interpret or apply secs. 301, 303, 307, 48 Stat. 1081, 1082, as amended, 1083, as amended, 47 U.S.C. 301, 303, 307)

[38 FR 1918, Jan. 19, 1973, as amended at 40 FR 15884, Apr. 8, 1975; 40 FR 25459, June 16, 1975; 40 FR 27939, July 2, 1975; 41 FR 22942, June 8, 1976; 41 FR 32892, Aug. 6, 1976; 43 FR 4022, Jan. 31, 1978; 45 FR 26062, Apr. 17, 1980; 48 FR 38478, Aug. 24, 1983; 49 FR 3999, Feb. 1, 1984; 50 FR 47054, Nov. 14, 1985; 51 FR 9965, Mar. 24, 1986; 56 FR 64859, Dec. 12, 1991; 60 FR 55480, Nov. 1, 1995; 63 FR 33876, June 22, 1998; 66 FR 20756, Apr. 25, 2001; 67 FR 13231, Mar. 21, 2002]